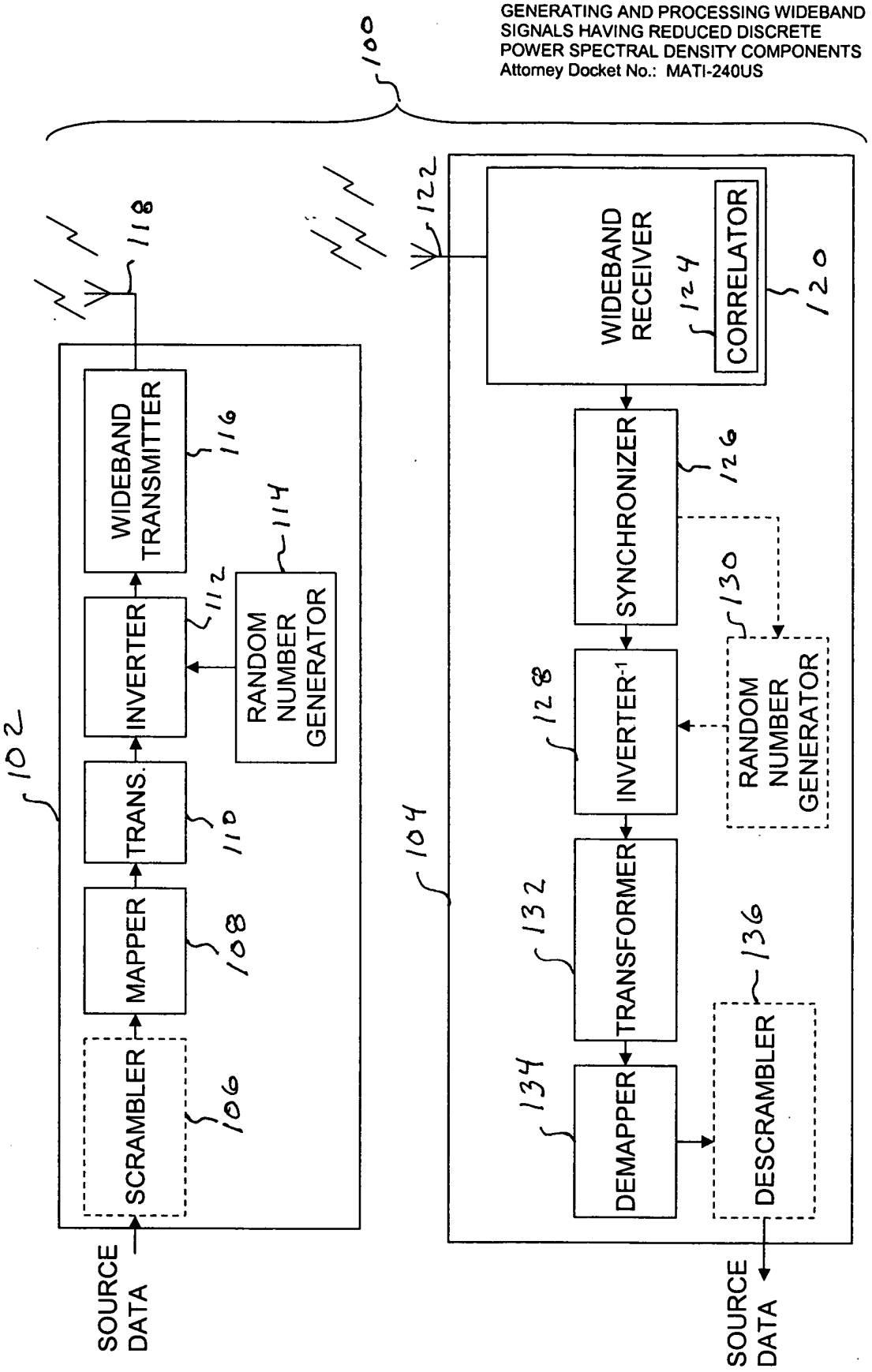
100
102
104
SOURCE DATA
SCRAMBLER
106
MAPPER
108
TRANS.
110
INVERTER
112
RANDOM NUMBER GENERATOR
114
WIDEBAND TRANSMITTER
116
118
122
WIDEBAND RECEIVER
124
CORRELATOR
120
SYNCHRONIZER
126
INVERTER-1
128
TRANSFORMER
132
DEMAPPER
134
DESCRAMBLER
136
RANDOM NUMBER GENERATOR
130
SOURCE DATA

FIG. 1

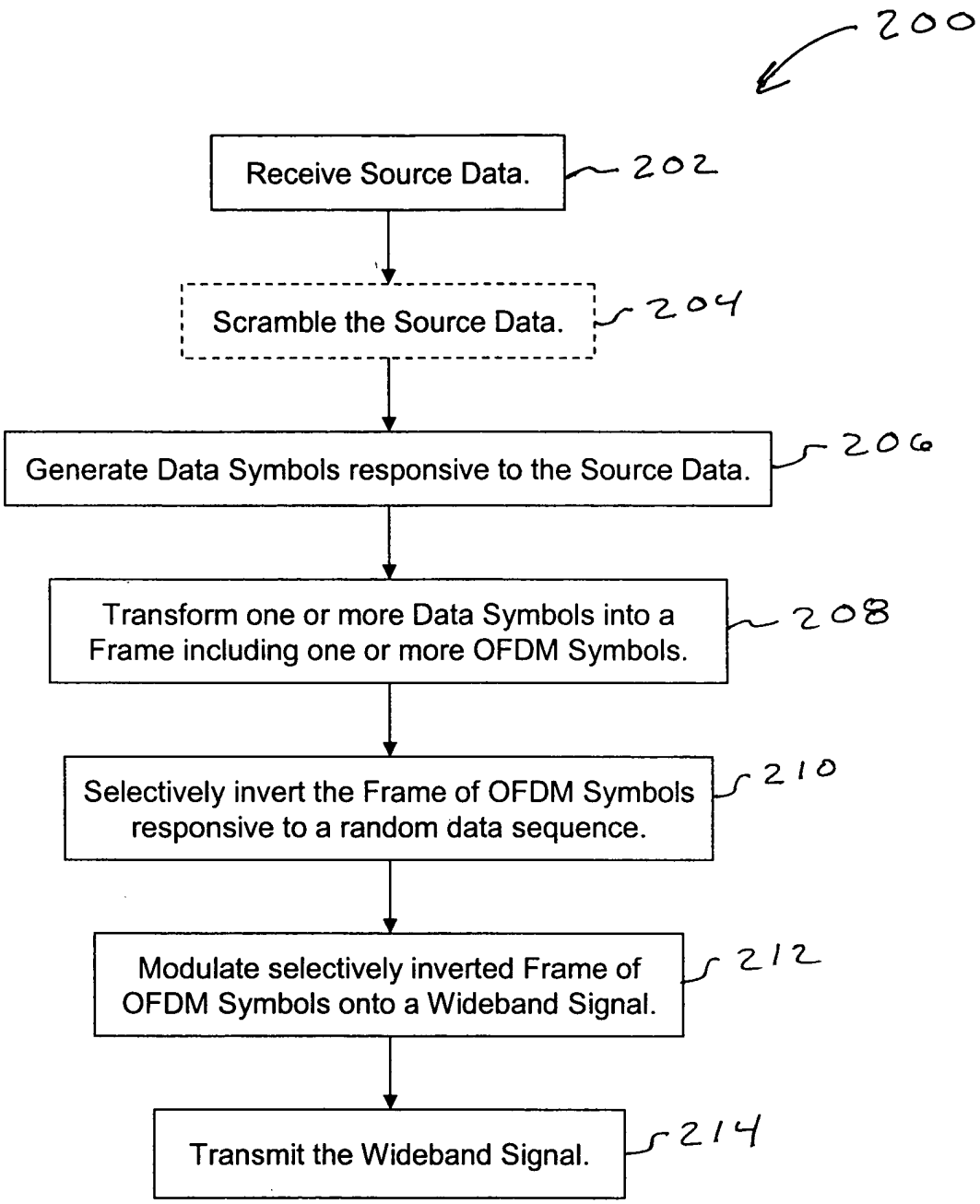
200
Receive Source Data.
202
Scramble the Source Data.
204
Generate Data Symbols responsive to the Source Data.
206
Transform one or more Data Symbols into a Frame including one or more OFDM Symbols.
208
Selectively invert the Frame of OFDM Symbols responsive to a random data sequence.
210
Modulate selectively inverted Frame of OFDM Symbols onto a Wideband Signal.
212
Transmit the Wideband Signal.
214

FIG. 2

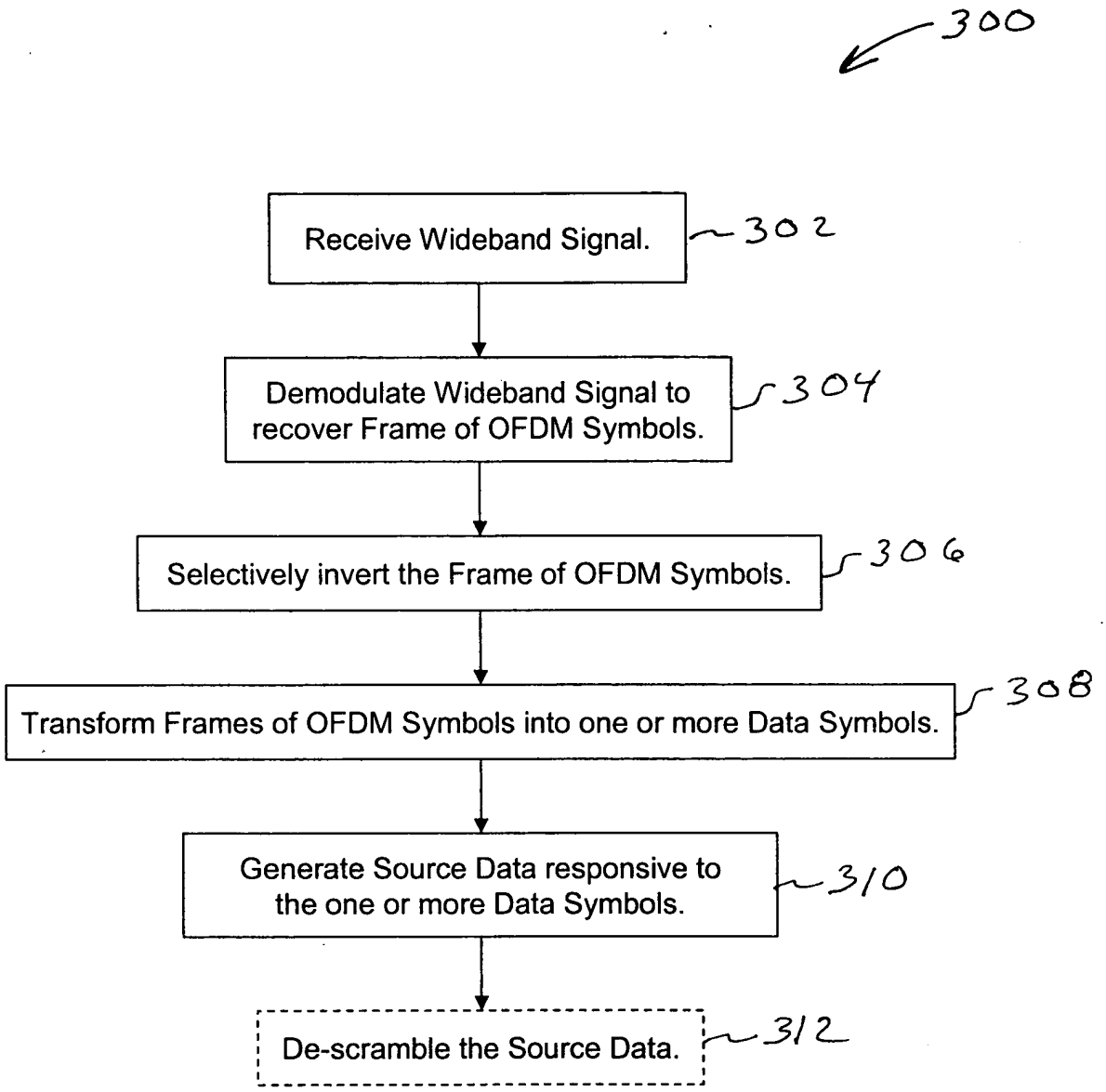
300
Receive Wideband Signal.
302
Demodulate Wideband Signal to recover Frame of OFDM Symbols.
304
Selectively invert the Frame of OFDM Symbols.
306
Transform Frames of OFDM Symbols into one or more Data Symbols.
308
Generate Source Data responsive to the one or more Data Symbols.
310
De-scramble the Source Data.
312

FIG. 3

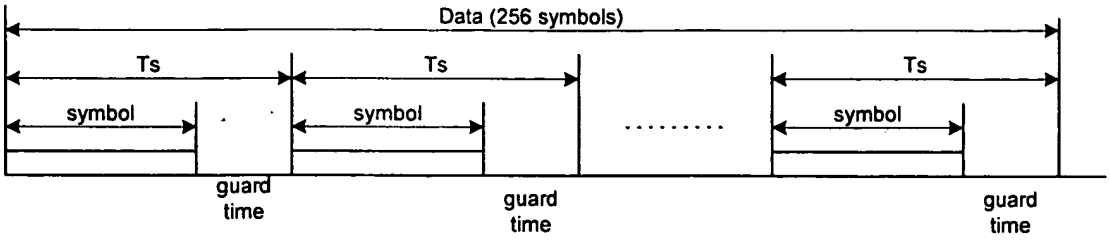

FIG. 4

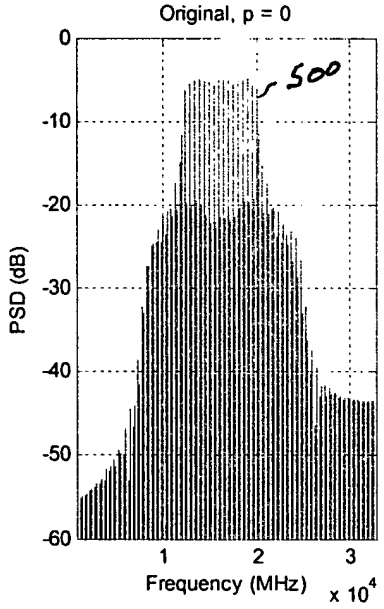

FIG. 5A

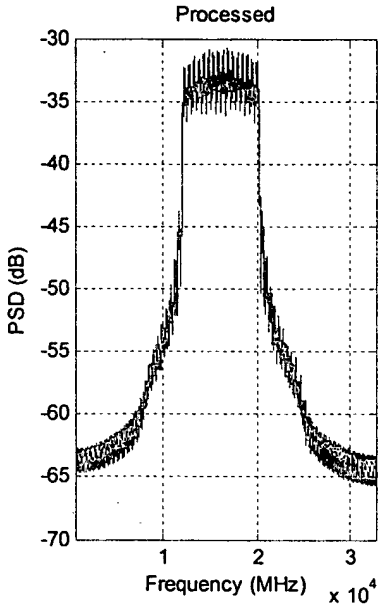

FIG. 5B

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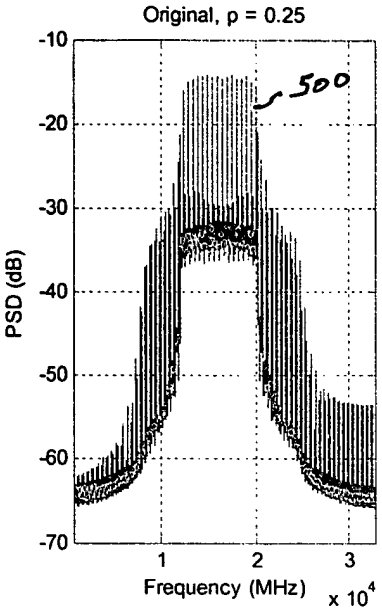

FIG. 6A

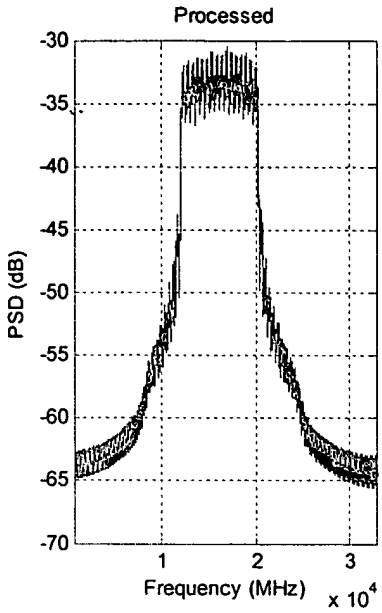

FIG. 6B

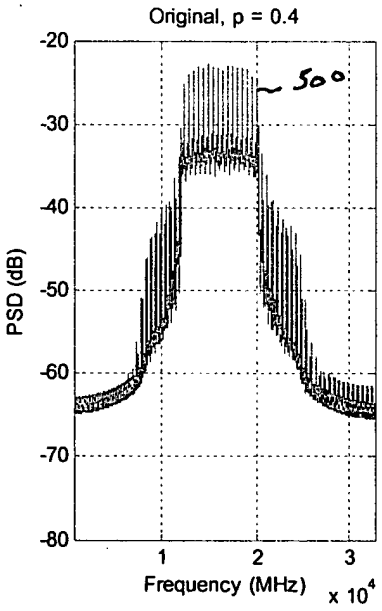

FIG. 7A

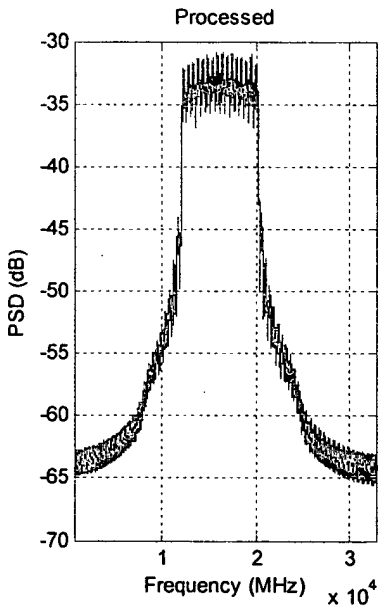

FIG. 7B

BEST AVAILABLE COPY

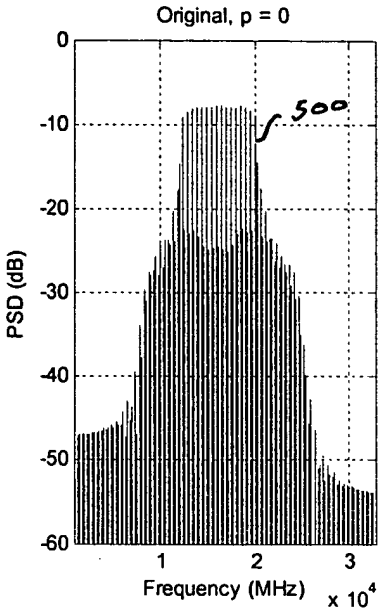

FIG. 8A

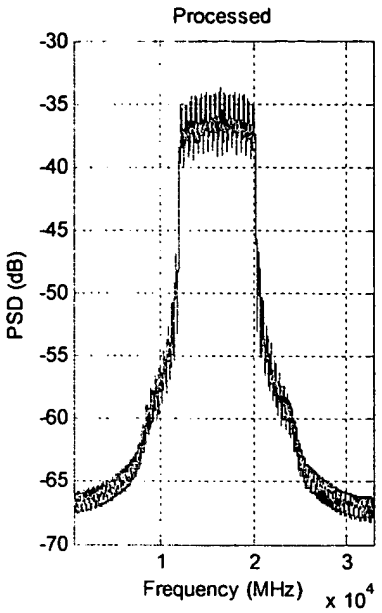

FIG. 8B

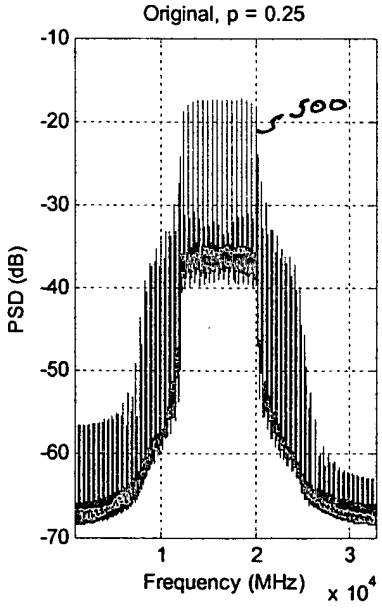

FIG. 9A

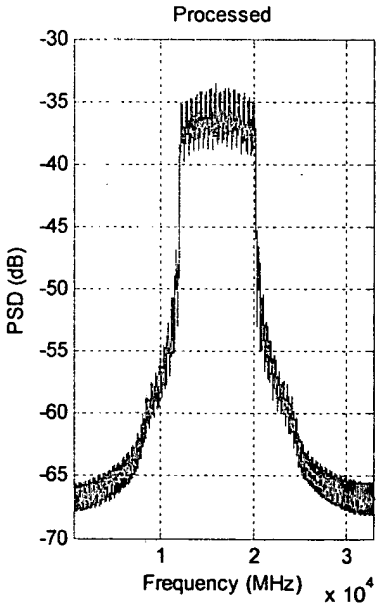

FIG. 9B

BEST AVAILABLE COPY

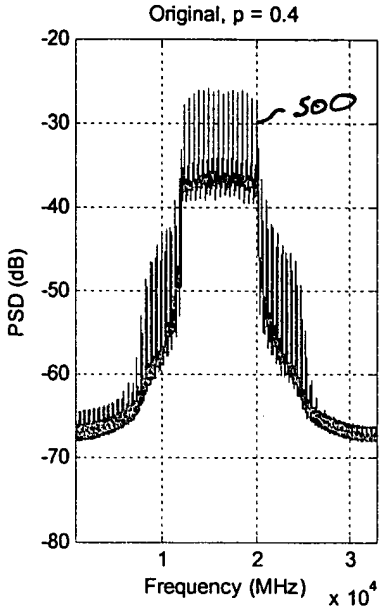

FIG. 10A

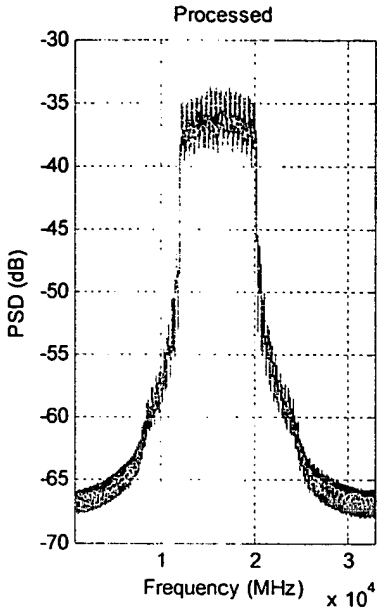

FIG. 10B

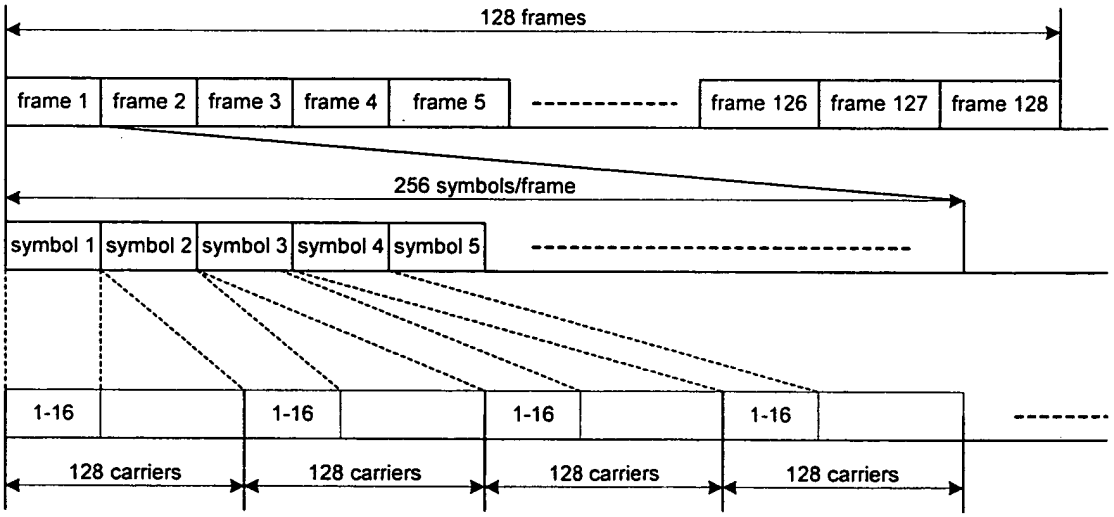

FIG. 11

BEST AVAILABLE COPY

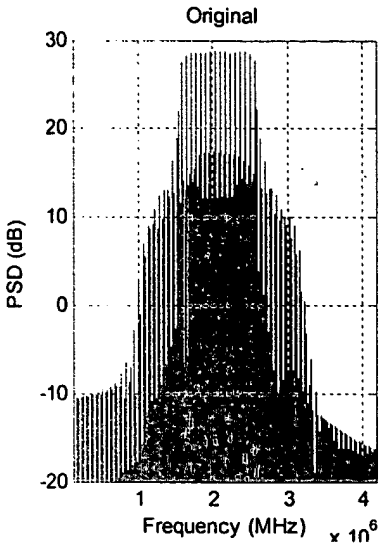

FIG. 12A

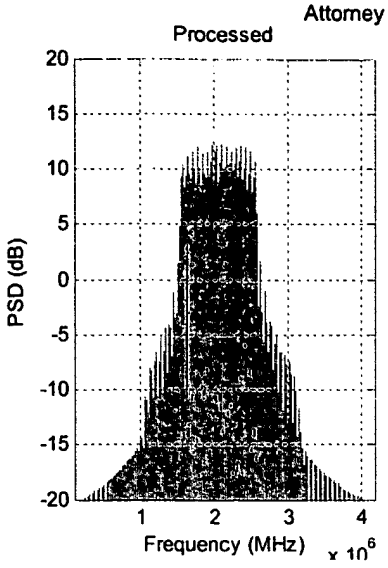

FIG. 12B

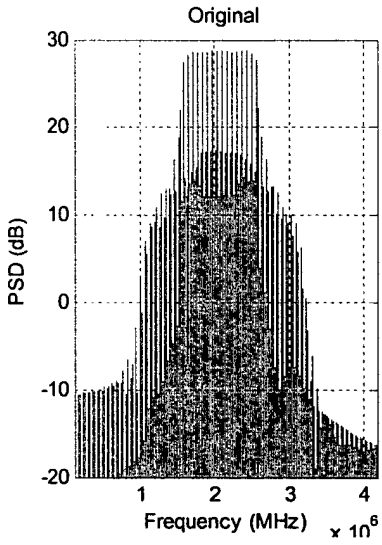

FIG. 13A

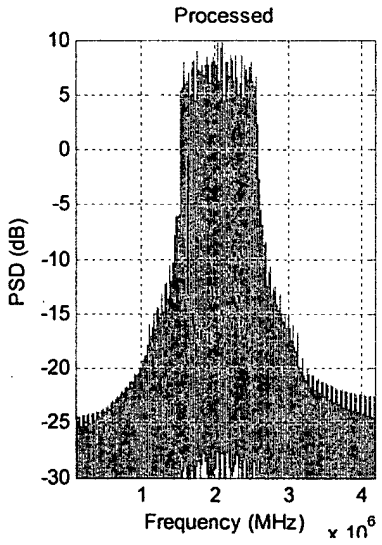

FIG. 13B

BEST AVAILABLE COPY

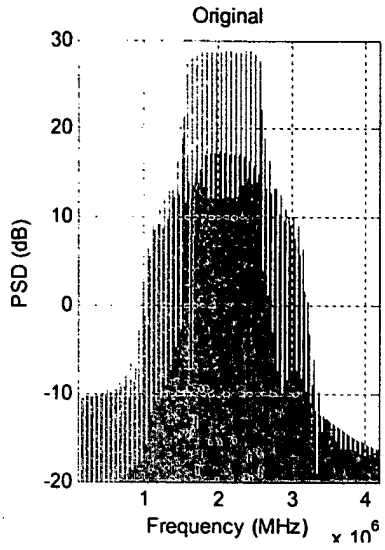

FIG. 14A

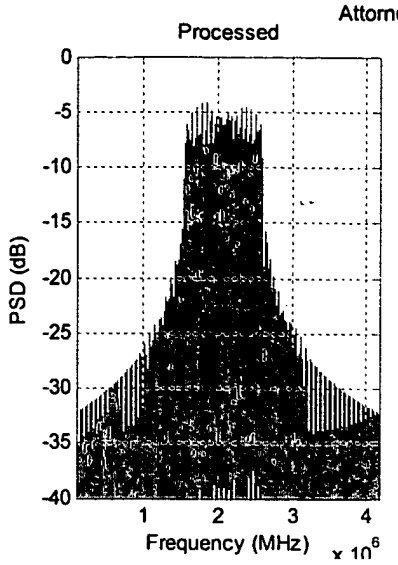

FIG. 14B

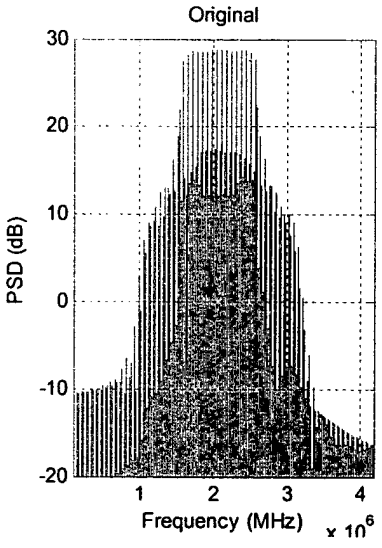

FIG. 15A

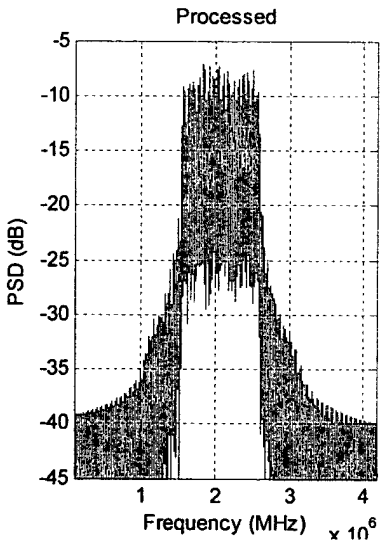

FIG. 15B

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